

REMARKS

The final Office action mailed on 19 August 2005 (Paper No. 20050816) has been carefully considered.

Claim 15 is being amended. Thus, claims 1, 5, 10, 11, 15 and 28 thru 37 are pending in the application.

In the latter regard, it should be noted that independent claim 15 is being amended merely to recite the functions of the call manager and the public/private communication service unit in a form consistent with the recitation of the last three steps of independent method claim 1. That is, the functions of the call manager and the public/private communication service unit, as recited in previously presented claim 15, are merely being reworded to appear in a different form, but in a form consistent with the recitation of the last three steps of previously presented independent method claim 1. Thus, the amendment of claim 15 does not present any new issue not previously considered by the Examiner and, accordingly, this Amendment After Final should be entered.

In paragraph 4 of the Office action, the Examiner rejected claims 1, 5, 10, 11, 15, 28 and 29 under 35 U.S.C. §103 for alleged unpatentability over Nishida, U.S. Patent No. 5,995,828, in view of Leung *et al.*, U.S. Patent No. 6,466,964. In paragraph 5 of the Office action, the Examiner rejected claims 30 thru 33 under 35 U.S.C. §103 for alleged

unpatentability over Nishida '828 in view of Leung *et al.* '964, and further in view of Sayers *et al.*, U.S. Patent No. 6,729,929. In paragraph 6 of the Office action, the Examiner rejected claims 34 thru 37 under 35 U.S.C. §103 for alleged unpatentability over Nishida '828 in view of Leung *et al.* '964 and Sayers *et al.* '929, and further in view of Lee *et al.*, U.S. Patent No. 6,885,668. For the reasons stated below, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §103.

The present invention relates to a unified in-building communication method in a communication system connected to a public land mobile network (PLMN), a public switched telephone network/integrated services digital network (PSTN/ISDN), and an Internet protocol (IP) network. The method comprises: setting a common cell area such that a wireless public or wireless in-company communication service is available in a prescribed local area; and connecting a mobile switching center (MSC) to the PLMN using a registered mobile terminal as an extension telephone in the common cell area, and bypassing a communication service request from an unregistered mobile terminal to the PLMN, so that the PLMN can share a base station. The registered mobile terminal communicates with a wire extension terminal or a wireless extension terminal, and the registered mobile terminal wirelessly receives a data service through the IP network. The wireless in-building communication service of the present invention is performed in a single cell so that a handoff does not occur. The wireless in-building communication

service of the present invention is performed such that, even for the same service provider, when the registered mobile terminal moves out of the common cell and moves into the PLMN and vice versa, the handoff does not occur.

The primary reference cited by the Examiner is Nishida, U.S. Patent No. 5,995,828. Nishida '828 relates to a portable handy phone system which comprises a first radio base station connected to a telephone network for executing radio communication with portable handy phones existing in a first radio communication zone, and a second radio base station connected to the telephone network for executing radio communication with portable handy phones existing in a second radio communication zone different from the first radio communication zone. The first radio base station comprises a first radio interface section for executing radio communication with portable handy phones in the first radio communication zone, a first system-to-system interface section for communicating with the second radio base station, and a first control section. The first control section responds to an incoming call from the telephone network designated to a portable handy phone existing in the first radio communication zone, causes the designated portable handy phone to receive the incoming call through the first radio interface section, and causes the first system-to-system interface section to transmit information relating to the designated portable handy phone to the second radio base station.

The secondary references cited by the Examiner are Leung *et al.*, U.S. Patent No. 6,466,964, Sayers *et al.*, U.S. Patent No. 6,729,929, and Lee *et al.*, U.S. Patent No. 6,885,668.

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Leung *et al.* '964 discloses methods and apparatus for enabling a node that does not support Mobile IP to roam from a first Foreign Agent to a second Foreign Agent. In a Foreign Agent that supports Mobile IP, a method of registering a node that does not support Mobile IP with a Home Agent that supports Mobile IP includes detecting a node in a vicinity of the Foreign Agent, composing a registration request specifying a node ID associated with the node, and sending the registration request to the Home Agent. When the Home Agent receives the registration request from a first Foreign Agent, the Home Agent updates a mobility binding table to associate the first Foreign Agent with the node. In addition, the Home Agent notifies a second Foreign Agent to update its visitor table to reflect roaming of the node from the second Foreign Agent to the first Foreign Agent.

Sayers *et al.* '929 relates to a method and apparatus for controlling wireless networks. The communications system extends over a cellular region and is formed of a plurality of wireless cells. Each cell covers an area which includes a portion of the cellular region. Each particular cell includes a base station having a transmitter for transmitting a particular cell signal having parameters including a transmitting frequency and a transmitting power. The particular cell signal is transmitted to cover a portion of

the cell region. Each of the base stations includes a parameter detector for detecting the other parameters of the other cell signals from the other cells in the cellular region. A parameter controller controls the particular parameters for the particular cell. The parameters for the particular cell are based upon the other parameters for the other cell signals so that the particular cell signal does not interfere with the other cell signals in the cellular region.

Lee *et al.* '668 discloses an apparatus and a method capable of processing low-speed circuit data lower than 64 kbps and high-speed packet data higher than 64 kbps in which a high-speed data network is constructed by converting an LCIN (local CDMA (code division multiple access) interconnection network) for supplying a communication path of packet data among sub-systems in a BSC (base station controller) of a CDMA system to an ATM (asynchronous transfer mode) for processing high-speed data, installing a TSB (transcoder selector bank) or an SDU (selector distribution unit) for processing high-speed packet data higher than 64 kbps in the BSC, and linking an ATM switch to an MSC (mobile switching center) to provide a high-speed data service with respect to another network. The TSB for processing voice data and low-speed data lower than 64 kbps and high-speed data higher than 64 kbps, or the TSB for processing high-speed data higher than 64 kbps is provided to the BSC, thus allowing high-speed data processing up to 2 mbps, high-speed data service, multimedia service like a video service, and high-speed Internet service.

On page 4 of the final Office action, the Examiner admits that Nishida '828 does not disclose certain features of the invention recited in independent claims 1 and 15, but the Examiner alleges that Leung *et al.* '964 discloses those features. However, initially, there is a question as to whether the references contain sufficient motivation, suggestion or instruction to cause a person of ordinary skill in the art to arrive at the combination set forth by the Examiner, and this question raises a further question as to whether the combination of references is a valid combination under U.S. law (35 U.S.C. §103). However, even if the combination of references is a valid combination under 35 U.S.C. §103, the combined disclosures of Nishida '828 and Leung *et al.* '964, and in particular the disclosure of Leung *et al.* '964, do not disclose or suggest the "bypassing" step recited in independent method claim 1 or the "bypassing" function of the public/private communication service unit recited in independent apparatus claim 15.

In the latter regard, Leung *et al.* '964 merely discloses checking to determine whether a node needs to be registered (in block 312 of Figure 3A), and if registration is needed, generating a registration request (block 314) and sending the registration request to a home agent (block 316). If registration is not needed, no action is taken (block 318).

Thus, Leung *et al.* '964 simply discloses that, when the destination address of the received packet is one that may not be permitted to roam in the network, registration of

the node is performed. However, in contrast to the present invention, Leung *et al.* '964 does not disclose or suggest bypassing of the communication service request of an unregistered mobile terminal to a public land mobile network as recited in independent claims 1 and 15 of the present application, as amended. Therefore, even if the disclosure of Nishida '828 is modified in accordance with the disclosure of Leung *et al.* '964 as suggested by the Examiner, the "bypassing" feature of the present invention is not achieved or obtained.

Further, considering the contrast and differences between the invention and the cited prior art, it should be noted that the "registration request" discussed in Leung *et al.* '964 (referring to block 314 and 316 of Figure 3A) is entirely different and distinguishable from the "communication service request" recited in claims 1 and 15.

Furthermore, the "home agent" discussed in Leung *et al.* '964 (block 316) is not the same as the "public land mobile network" recited in claims 1 and 15 because the "home agent" of Leung *et al.* '964 is an entity which performs connection between first and second foreign agents by registering an IP node according to an IP node registration request for sending a data packet of a foreign agent to a destination address, whereas the "public land mobile network" of the present invention does not perform IP node registration.

Finally, the “sending” of the “registration request” to a “home agent” in Leung *et al.* ‘964 (block 316) is not the same as the “bypassing” feature or function recited in claims 1 and 15. That is, in Leung *et al.* ‘964, the “sending” function in Leung *et al.* ‘964 comprises sending of a node registration request so that the foreign agent will send a data packet to a destination address. In contrast, in the present invention, “bypassing” the communication service request to the public land mobile network comprises passing off a call connection request, received in a wireless in-company communication system, to the public land mobile network so that the public land mobile network will actually receive the call connection request.

To summarize, there is nothing in the “four corners” of the disclosure of Nishida ‘828 (and the Examiner has not cited anything) which would motivate or instruct a person of ordinary skill in the art to seek the disclosure of Leung *et al.* ‘964, and to combine that disclosure with the disclosure of Nishida ‘828. Thus, the combination of references is not valid or appropriate under 35 U.S.C. §103.

However, even if the combination of references is valid under 35 U.S.C. §103, for the reasons stated above, the combination of references does not result in achievement of all of the steps and functions recited in independent claims 1 and 15, respectively.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this Amendment.

Respectfully submitted,



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